

RAIL STRIPES ARE 150 mm IN WIDTH FOR BARRICADES 0.9 m OR GREATER IN LENGTH. FOR BARRICADES LESS THAN 0.9 m IN LENGTH, 100 mm STRIPES MAY BE USED.

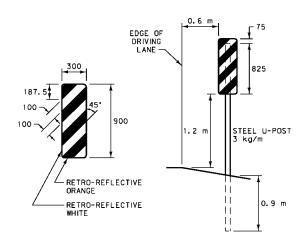
THE PREDOMINANT COLOR FOR OTHER BARRICADE COMPONENTS IS WHITE, BUT UNPAINTED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED.

WHERE B(III) BARRICADES ARE TO FACE TRAFFIC FROM TWO DIRECTIONS, STRIPING ON BOTH THE FRONT AND REAR SIDES IS REQUIRED.

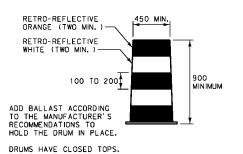
MATERIALS ACCEPTABLE FOR BARRICADE FRAMEWORK INCLUDE WOOD, LIGHTWEIGHT YIELDING METAL AND LIGHTWEIGHT YIELDING PLASTIC. WOOD USED IN FRAMEWORK FOR BARRICADES MAY NOT EXCEED 50 x 100 IN SIZE. USE STANDARD GRADE (NO. 2) OR BETTER S4S LUMBER.

USE SANDBAGS OF SUFFICIENT WEIGHT TO HOLD THE BARRICADES IN PLACE. WATERPROOF SANDBAGS DURING PERIODS OF FREEZING

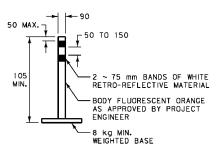
#### PORTABLE BARRICADES



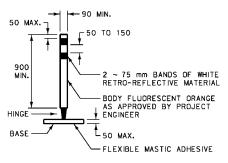
VERTICAL PANEL (VP-1R SHOWN. REVERSE FOR VP-1L.)



PLASTIC DRUM



**GUIDE POST** 



FLEXIBLE GUIDE POST (SELF RIGHTING AFTER IMPACT)

## NOTES:

BARRICADES OR VERTICAL PANELS DESIGNATED "R" ARE PLACED TO THE RIGHT SIDE OF APPROACHING TRAFFIC. THOSE DESIGNATED "L" ARE PLACED TO THE LEFT SIDE.

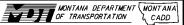
SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART VIFOR ADDITIONAL INFORMATION.

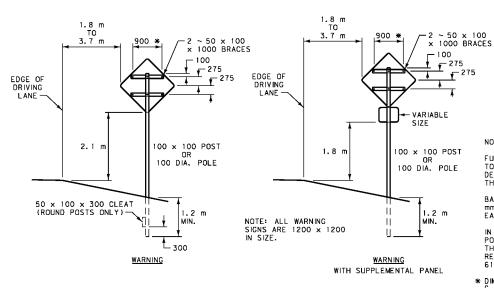
# ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

DETAILED	DRAWING
REFERENCE	DWG. NO.
REFERENCE STANDARD SPEC. SECTION 618	618-00

BARRICADES AND CHANNELIZING DEVICES

EFFECTIVE: AUGUST 1999





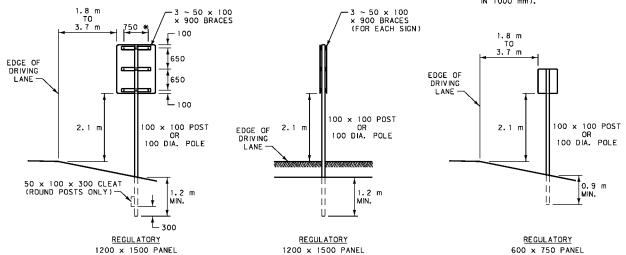
FURNISH POST OR POLE LENGTHS TO ACCOMMODATE THE FOUNDATION DEPTH, THE MOUNTING HEIGHT AND THE MOUNTINGS.

BACKFILL FOUNDATION HOLES IN 205 mm LIFTS, THOROUGHLY TAMPING EACH LIFT.

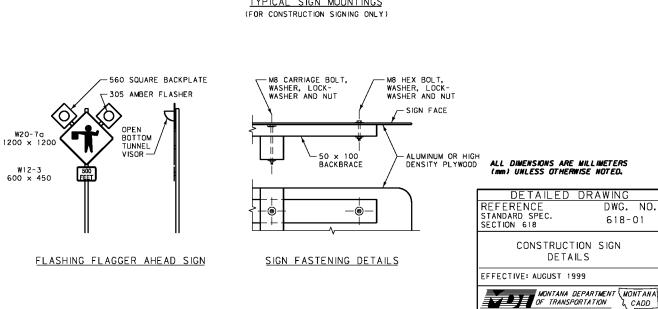
IN HIGH WIND AREAS INSTALL LARGER POSTS OR POLES COMPLYING WITH THE FOUNDATION AND BREAKAWAY REQUIREMENTS OF DTL. DWG. NO.

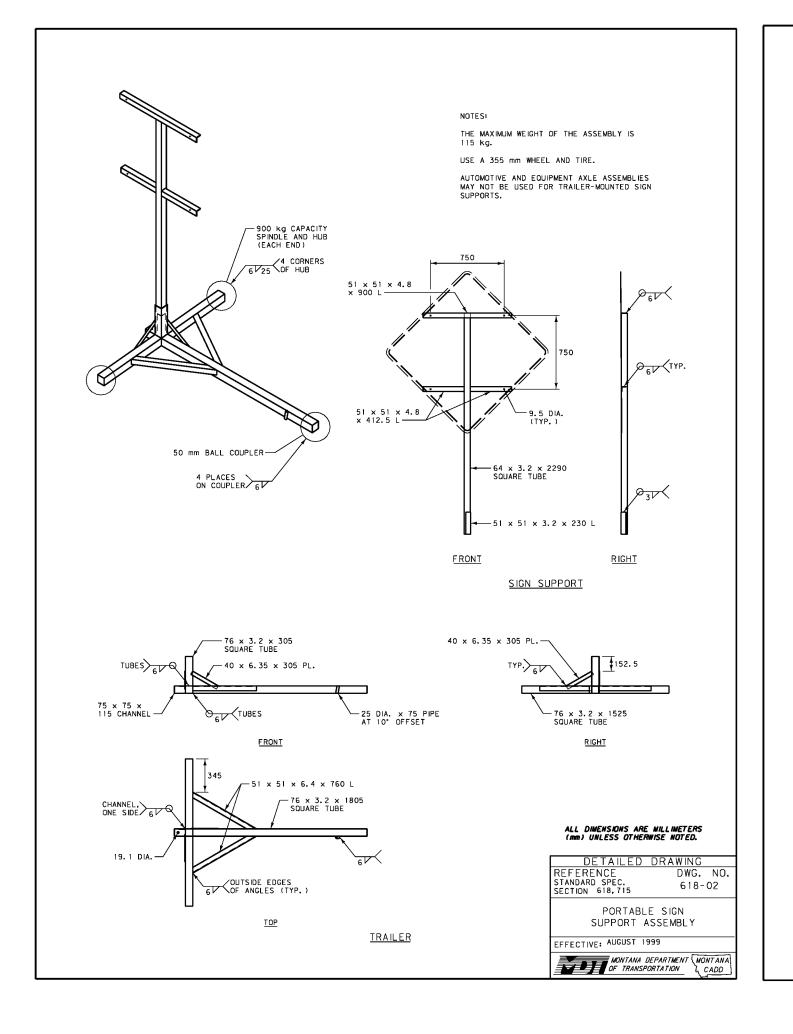
\* DIMENSIONS ARE FROM & BOLT TO & BOLT.

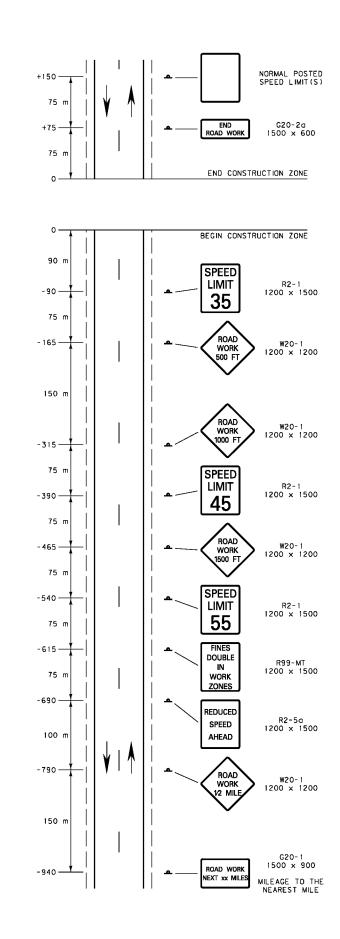
VERTICAL ALIGNMENT OF SIGNS IS TO BE WITHIN 5° OF PLUMB (85 mm IN 1000 mm).



TYPICAL SIGN MOUNTINGS







#### NOTES:

THIS SIGN LAYOUT IS INTENDED TO BE A PERMANENT INSTALLATION FOR THE DURATION OF THE PROJECT, AS APPROVED BY THE ENGINEER. OMIT OR COVER SIGNS WHEN NOT IN USE, INCLUDING SPEED LIMIT SIGNS NOT WARRANTE

INCLUDE REGULATORY SIGNING ONLY IF THE CONSTRUCTION ZONE CONTAINS A WORK ZONE OR HAS ROADWAY CONDITIONS THAT WARRANT SPEED RESTRICTIONS. MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.

OMIT THE G20-1 SIGN ON PROJECTS LESS THAN 3.2 KILOMETERS IN LENGTH.

SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION.

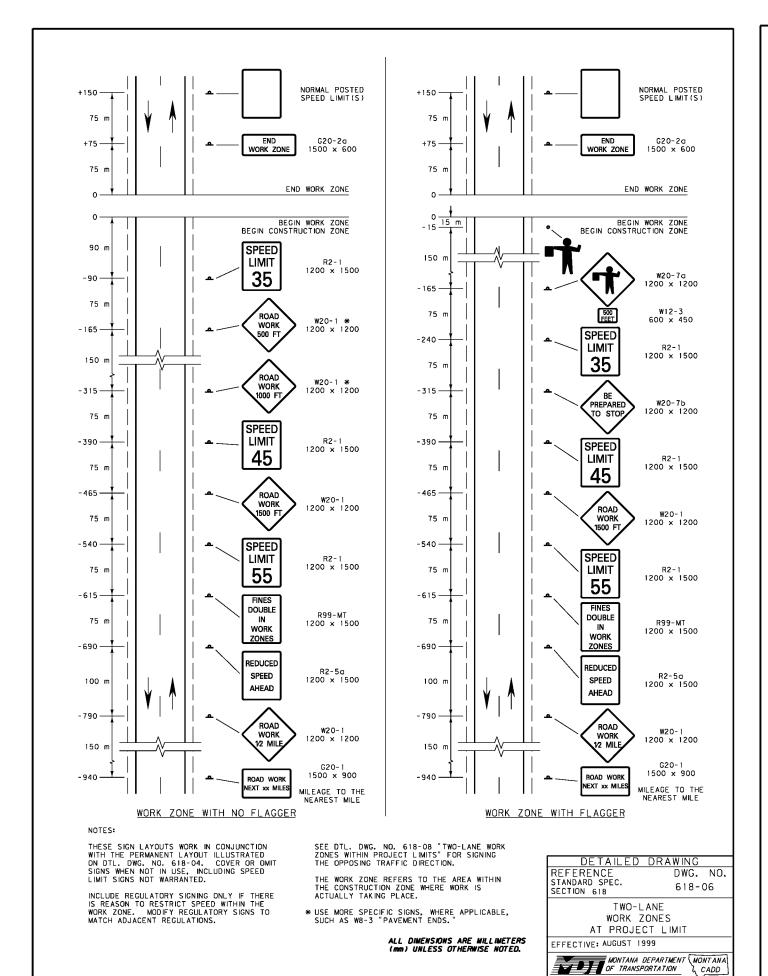
THE CONSTRUCTION ZONE REFERS TO THE GENERAL AREA THAT REQUIRES TEMPORARY WORK ZONE TRAFFIC CONTROL.

# ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

DETAILED DRAWING
REFERENCE DWG. NO.
STANDARD SPEC. 618-04

TWO-LANE PROJECT CONSTRUCTION ZONE





NORMAL POSTED +150 SPEED LIMIT(S) FND G20-2a +75 -WORK ZONE 1500 × 600 75 m END WORK ZONE BEGIN WORK ZONE 90 r SPEED LIMIT R2-1 1200 x 1500 - 90 -35 75 m WORK ZONE - 165 ---₩20-1a \* 1200 x 1200 150 m -315-75 m -390 -SPEED LIMIT 75 m 1200 x 1500 45 - 465 -WORK 75 m ₩20-1a ZONE 1200 x 1200 -540 -SPEED 150 n LIMIT R2-1 1200 x 1500 55 -690 -REDUCED R2-5a SPEED 1200 x 1500 AHEAD BEGIN CONSTRUCTION ZONE PROJECT CONSTRUCTION ZONE SIGNING (SEE DTL. DWG. NO. 618-04) WORK ZONE WITH NO FLAGGER

FND G20-2a +75 -1500 × 600 75 m END WORK ZONE -15 15 m BEGIN WORK ZONE 150 W20-7a 1200 x 1200 -165 -500 FEET 75 m 600 x 450 SPEED -240 -LIMIT R2-1 1200 x 1500 35 75 m -315-W20-7b 1200 × 1200 75 m -390 <del>-</del> SPEED LIMIT 75 m 1200 x 1500 45 -465 75 m W20-1a ZONE 1200 x 1200 -540 -SPEED 150 r LIMIT R2-1 1200 x 1500 55 -690-REDUCED R2-5a SPEED 1200 x 1500 AHEAD BEGIN CONSTRUCTION ZONE PROJECT CONSTRUCTION ZONE SIGNING (SEE DTL. DWG. NO. 618-04) WORK ZONE WITH FLAGGER

NORMAL POSTED SPEED LIMIT(S)

NOTES:

INCLUDE REGULATORY SIGNING ONLY IF THERE IS REASON TO RESTRICT SPEED WITHIN THE WORK ZONE. MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.

SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION. DO NOT LOCATE THESE SIGN LAYOUTS WITHIN 3.2 KILOMETERS OF ANOTHER LAYOUT.

THE WORK ZONE REFERS TO THE AREA WITHIN THE CONSTRUCTION ZONE WHERE WORK IS ACTUALLY TAKING PLACE.

+150 -

\* USE MORE SPECIFIC SIGNS, WHERE APPLICABLE, SUCH AS W8-3 "PAVEMENT ENDS."

ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

PLICABLE, STANDARD SPEC. 618-08

TWO-LANE

WORK ZONES

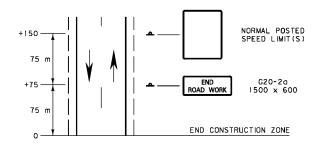
REFERENCE

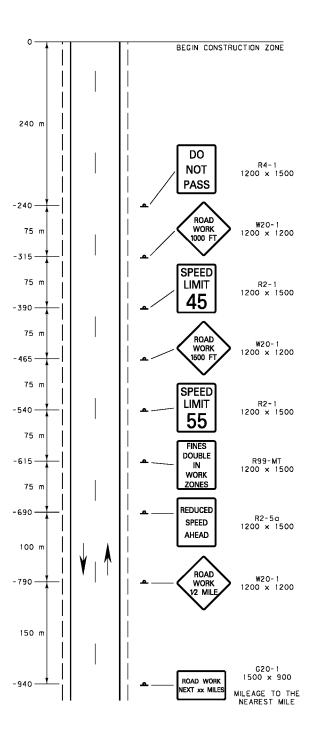
WORK ZONES Within Project Limits

DETAILED DRAWING

DWG. NO.







#### NOTES:

THIS SIGN LAYOUT WORKS IN CONJUNCTION WITH THE PERMANENT LAYOUT ILLUSTRATED ON DTL. DWG. NO. 618-04. COVER OR OMIT SIGNS WHEN NOT IN USE, INCLUDING SPEED LIMIT SIGNS NOT WARRANTED.

INCLUDE REGULATORY SIGNING ONLY IF THERE IS REASON TO RESTRICT SPEED WITHIN THE CONSTRUCTION ZONE. MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.

OMIT THE G20-1 SIGN ON PROJECTS LESS THAN 3.2 KILOMETERS IN LENGTH.

SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION.

THE CONSTRUCTION ZONE REFERS TO THE GENERAL AREA THAT REQUIRES TEMPORARY WORK ZONE TRAFFIC CONTROL.

FOR SEAL COAT WORK ZONE ACTIVITIES, USE THE FLAGGER APPLICATIONS OF THE WORK ZONE LAYOUTS FROM DTL. DWG. NO. 618-06 (AT PROJECT LIMIT) AND 618-08 (WITHIN PROJECT LIMITS).

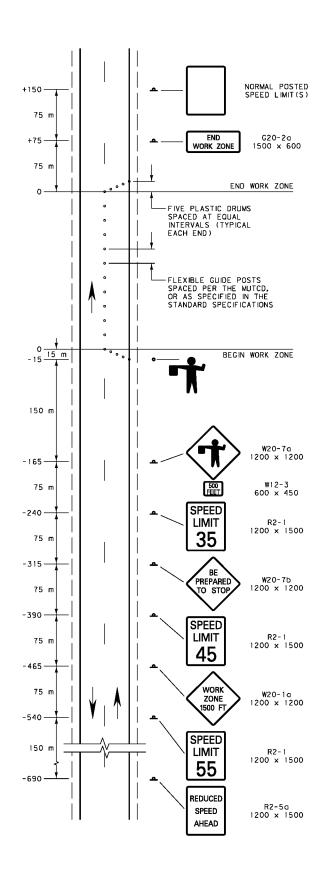
# ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

DETAILED DRAWING
REFERENCE DWG. NO.
STANDARD SPEC. 618-10

TWO-LANE SEAL COAT PROJECT CONSTRUCTION ZONE

EFFECTIVE: AUGUST 1999





#### NOTES

MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.

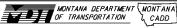
SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION.

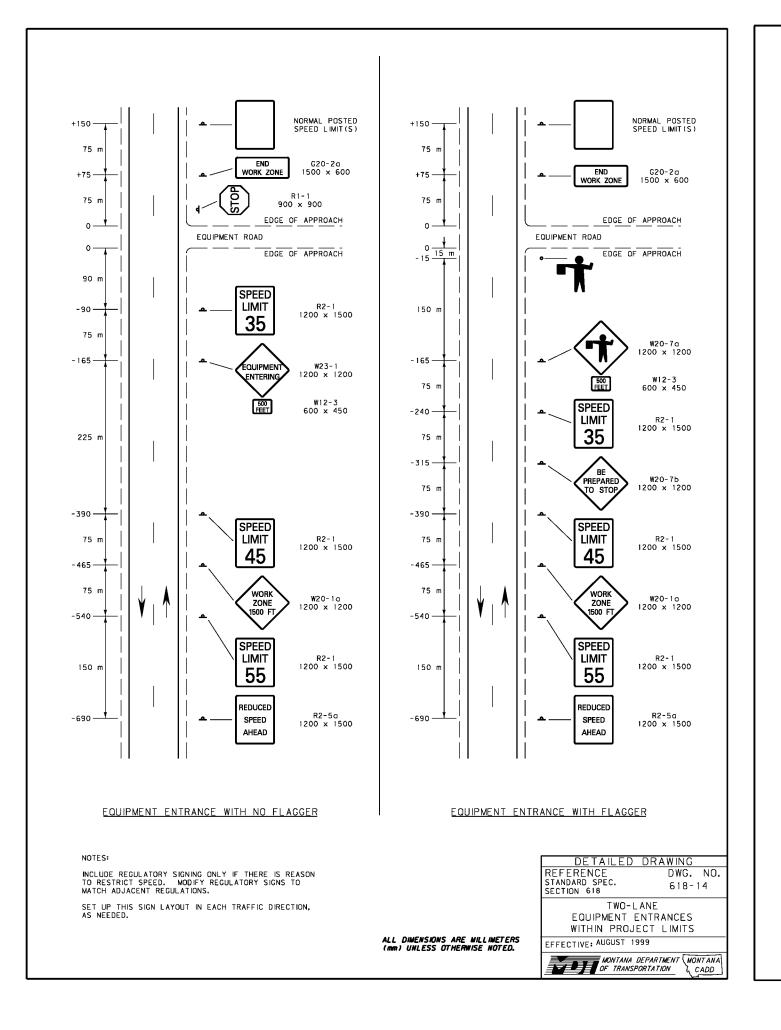
THE WORK ZONE REFERS TO THE AREA WITHIN THE CONSTRUCTION ZONE WHERE WORK IS ACTUALLY TAKING PLACE.

# ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

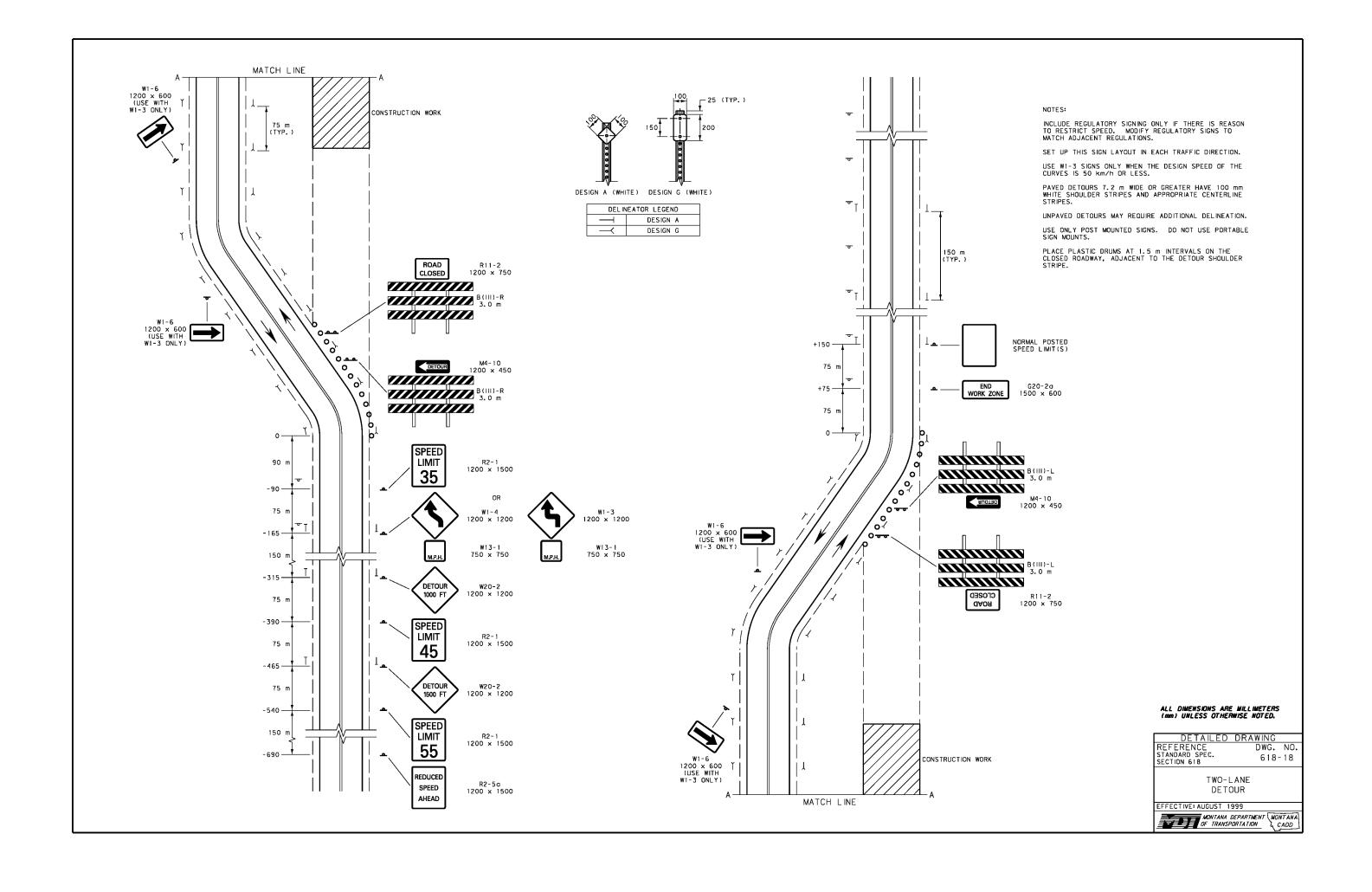
DETAILED DRAWING
REFERENCE DWG. NO.
STANDARD SPEC.
SECTION 618

TWO-LANE LANE CLOSURE

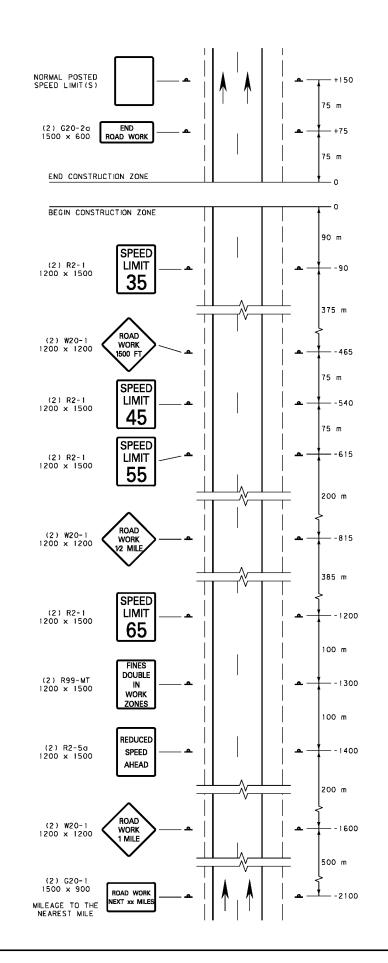




NORMAL POSTED SPEED LIMIT(S) NORMAL POSTED SPEED LIMIT(S) +150 -+150 -1500 x 600 1500 x 600 +75 — +75 -75 n 75 m 900 x 900 900 x 900 EDGE OF APPROACH EDGE OF APPROACH 0 — 0 — EQUIPMENT ROAD EQUIPMENT ROAD -15 15 m EDGE OF APPROACH EDGE OF APPROACH 90 r SPEED LIMIT R2-1 1200 x 1500 35 -90 -150 m ₩20-7a 1200 x 1200 75 n EQUIPMEN W23-1 500 FEET -165 -1200 x 1200 - 165 -600 x 450 ENTERING SPEED 75 n R2-1 1200 x 1500 LIMIT 500 FEET 600 x 450 35 150 -240-EQUIPMENT W23-1 1200 x 1200 75 m ENTERING PREPARED TO STOP 1200 x 1200 -315--315-600 x 450 75 m 75 n SPEED SPEED LIMIT R2-1 LIMIT R2-1 1200 x 1500 1200 x 1500 -390 --390 -45 45 75 75 ROAD WORK ROAL W20-1 -465 <del>-</del> - 465 -1200 x 1200 1200 x 1200 1500 F 1500 F 75 m 75 m SPEED **SPEED** -540 -LIMIT -540-LIMIT 1200 x 1500 1200 x 1500 75 75 n FINES FINES DOUBLE -615-DOUBLE -615-R99-MT R99-MT 1200 x 1500 1200 x 1500 WORK WORK 75 75 m ZONES ZONES -690 <del>-</del> REDUCED -690 -REDUCED SPFFD SPEED 1200 x 1500 1200 x 1500 AHEAD AHEAD 100 r 100 m ROAD ROAD WORK W20-1 -790 -W20-1 -790 WORK 1200 x 1200 1200 x 1200 EQUIPMENT ENTRANCE WITH NO FLAGGER EQUIPMENT ENTRANCE WITH FLAGGER NOTES: DETAILED DRAWING INCLUDE REGULATORY SIGNING ONLY IF THERE IS REASON TO RESTRICT SPEED. MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS. REFERENCE DWG. NO. STANDARD SPEC. 618-16 SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION, AS NEEDED. EQUIPMENT ENTRANCES OUTSIDE PROJECT LIMITS ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED. EFFECTIVE: AUGUST 1999 MONTANA DEPARTMENT MONTANA
OF TRANSPORTATION CADD



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## NOTES:

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INCLUDE REGULATORY SIGNING ONLY IF THE CONSTRUCTION ZONE CONTAINS A WORK ZONE OR HAS ROADWAY CONDITIONS THAT WARRANT SPEED RESTRICTIONS. MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.

OMIT THE G20-1 SIGN ON PROJECTS LESS THAN 3.2 KILOMETERS IN LENGTH.

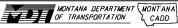
SET UP THIS SIGN LAYOUT IN EACH TRAFFIC

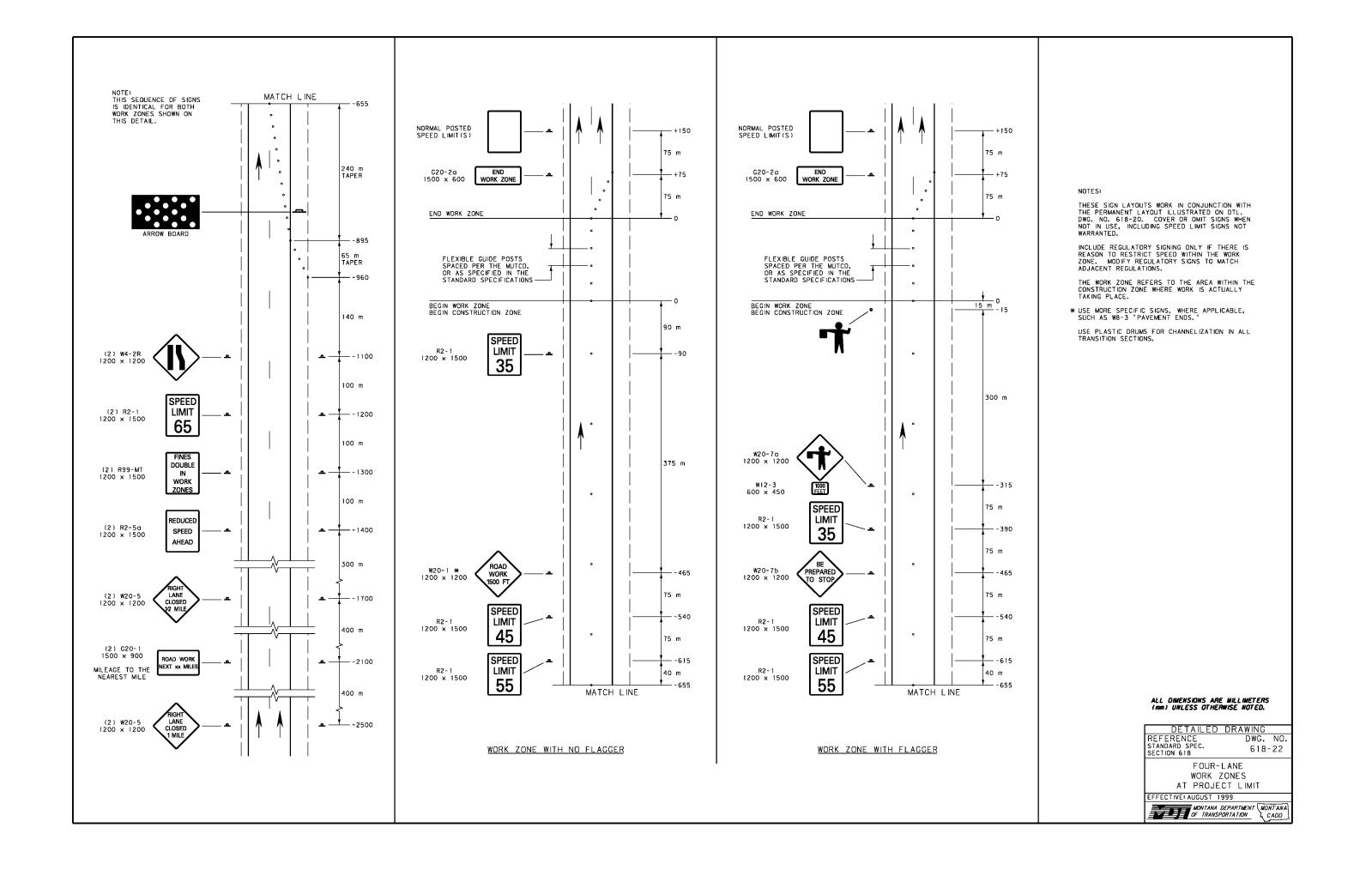
THE CONSTRUCTION ZONE REFERS TO THE GENERAL AREA THAT REQUIRES TEMPORARY WORK ZONE TRAFFIC CONTROL.

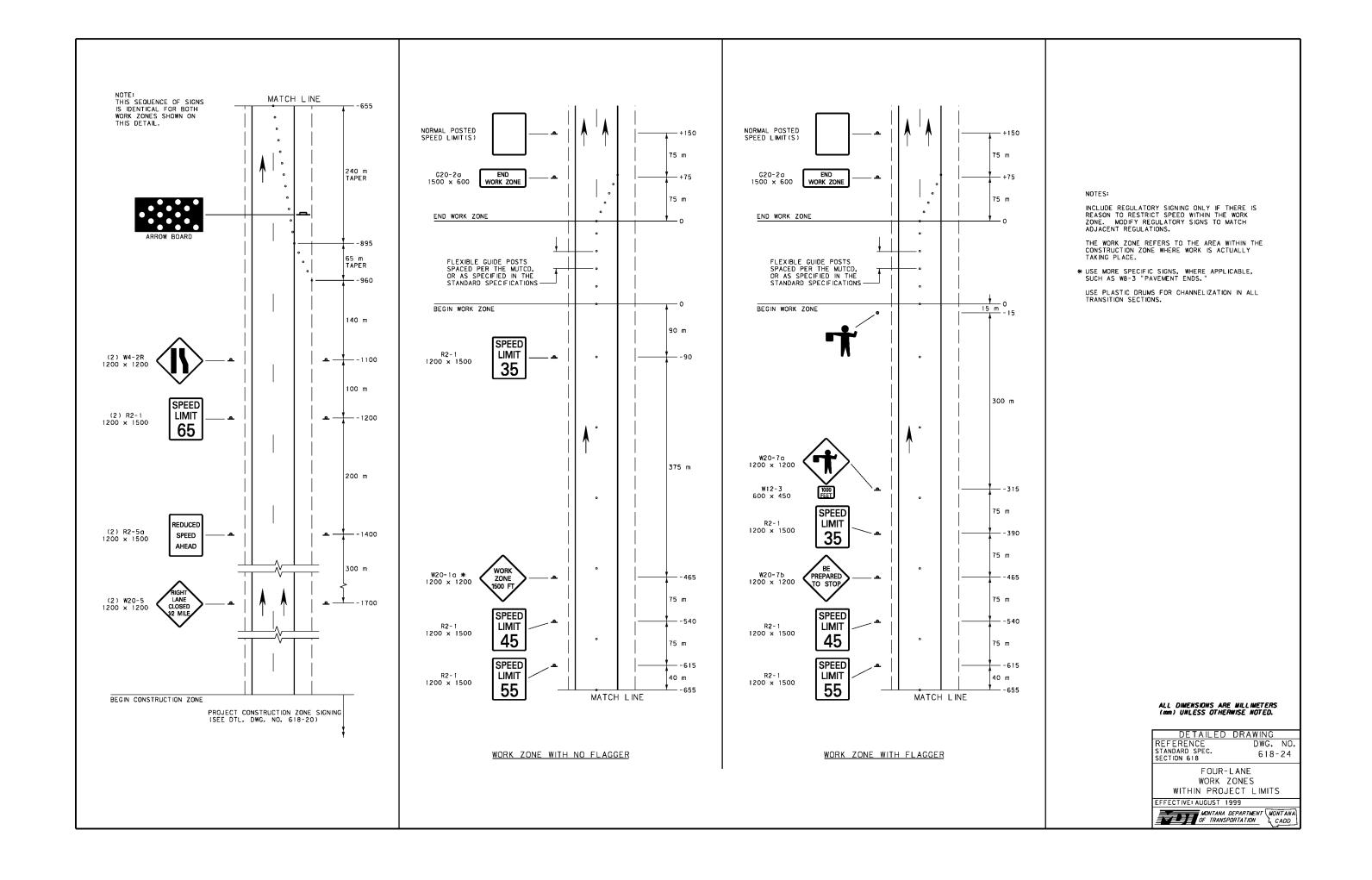
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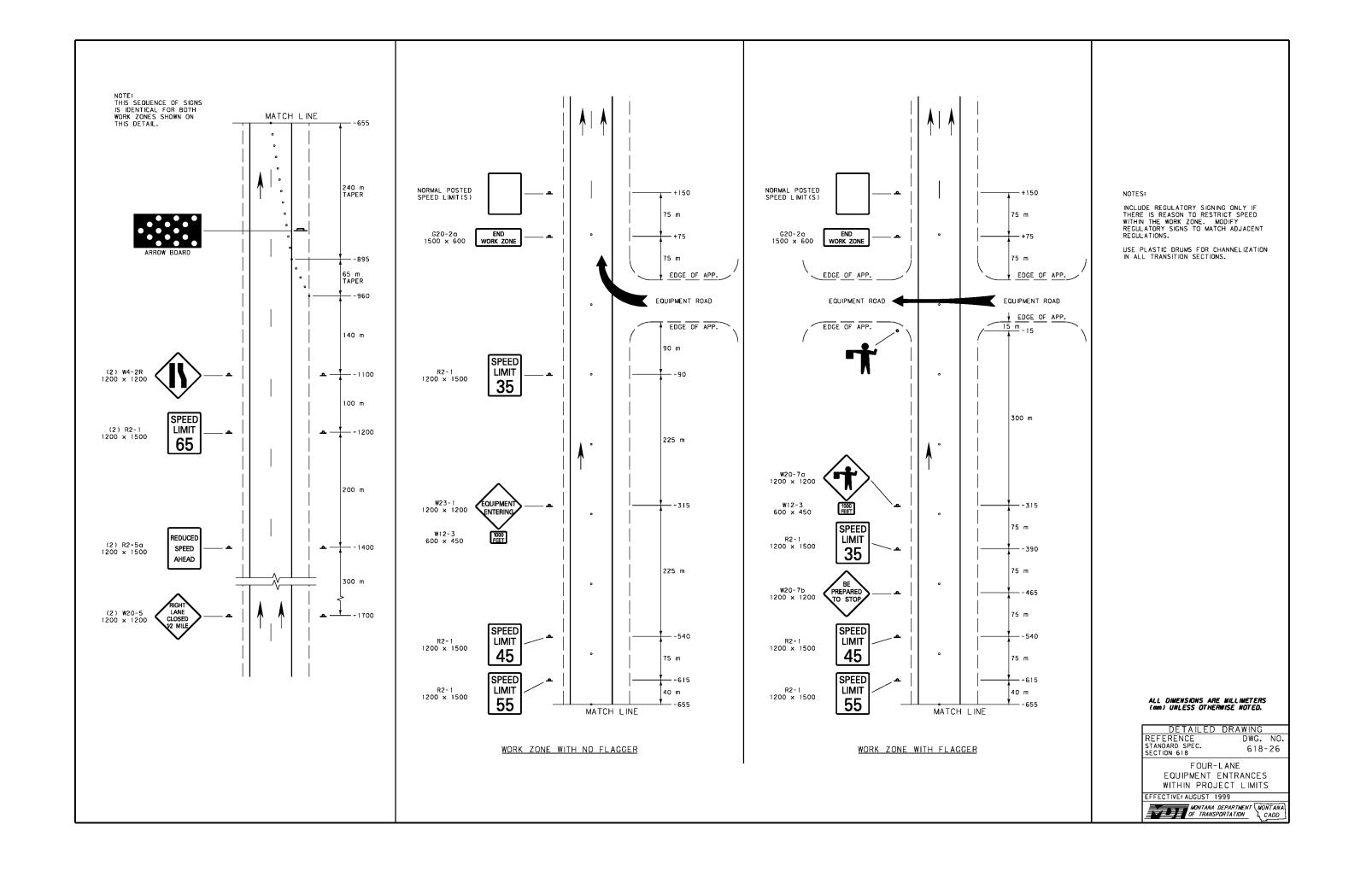
DETAILED DRAWING
REFERENCE DWG. NO
STANDARD SPEC.
SECTION 618 618-20

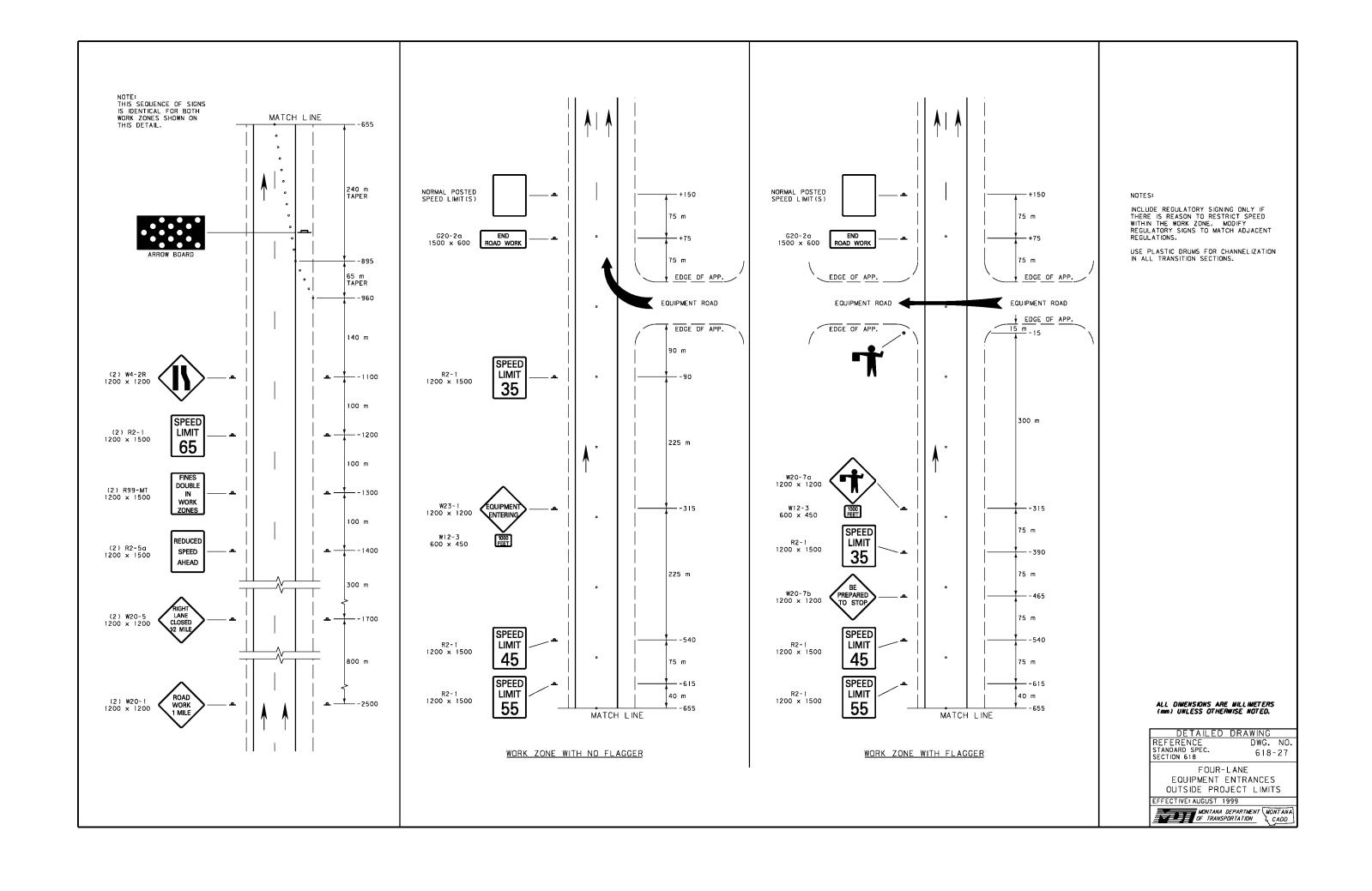
FOUR-LANE PROJECT CONSTRUCTION ZONE

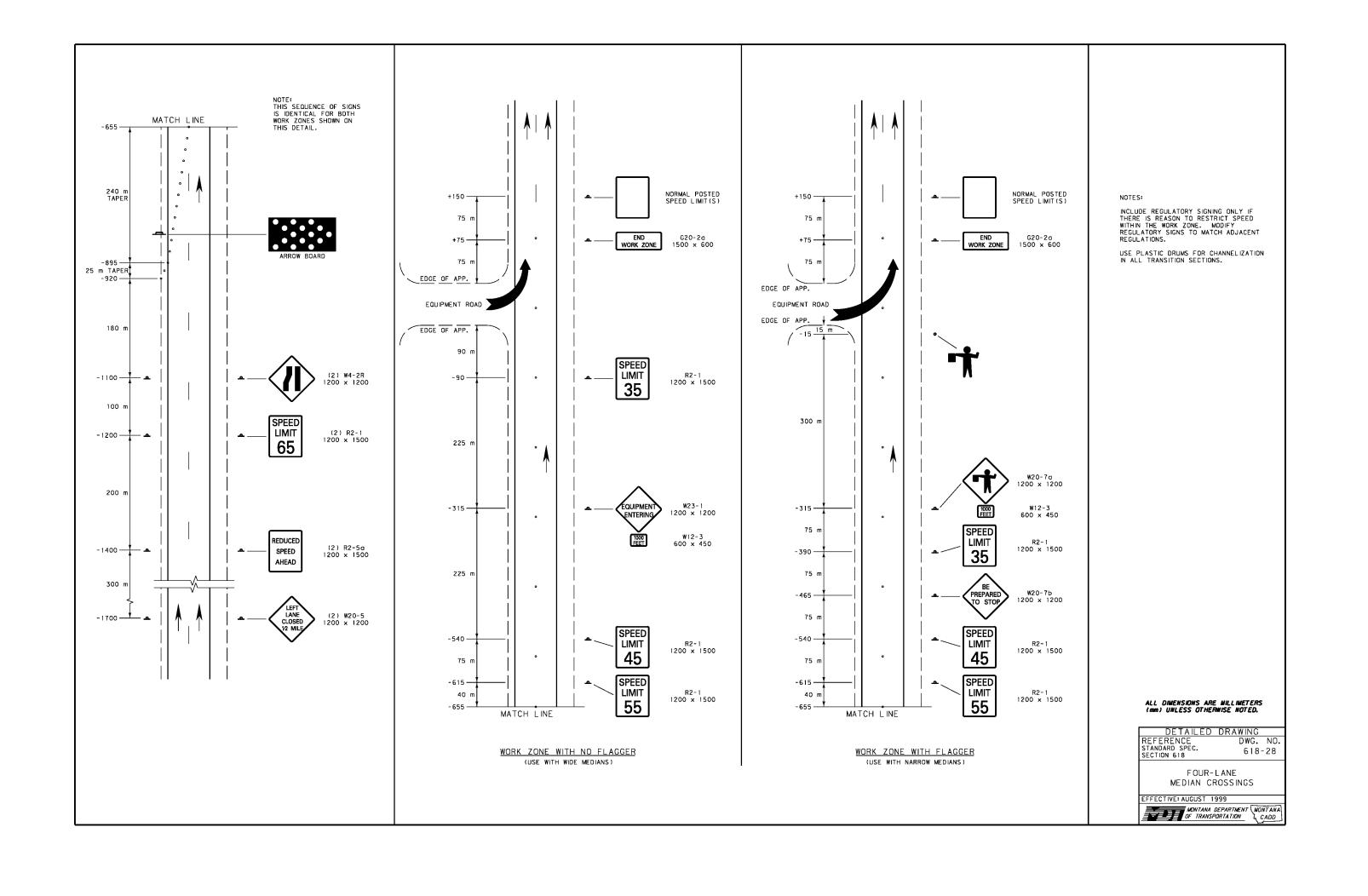


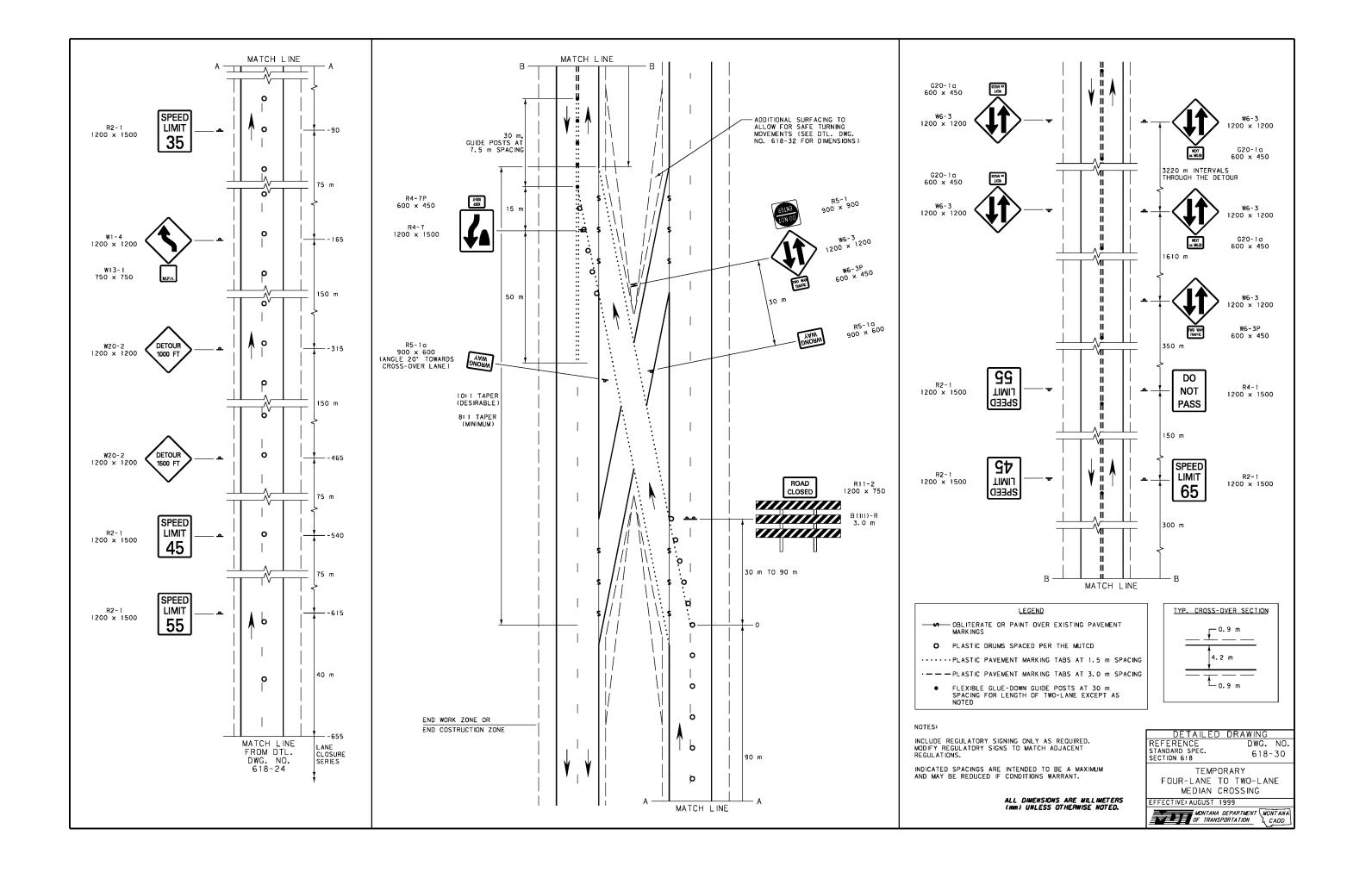


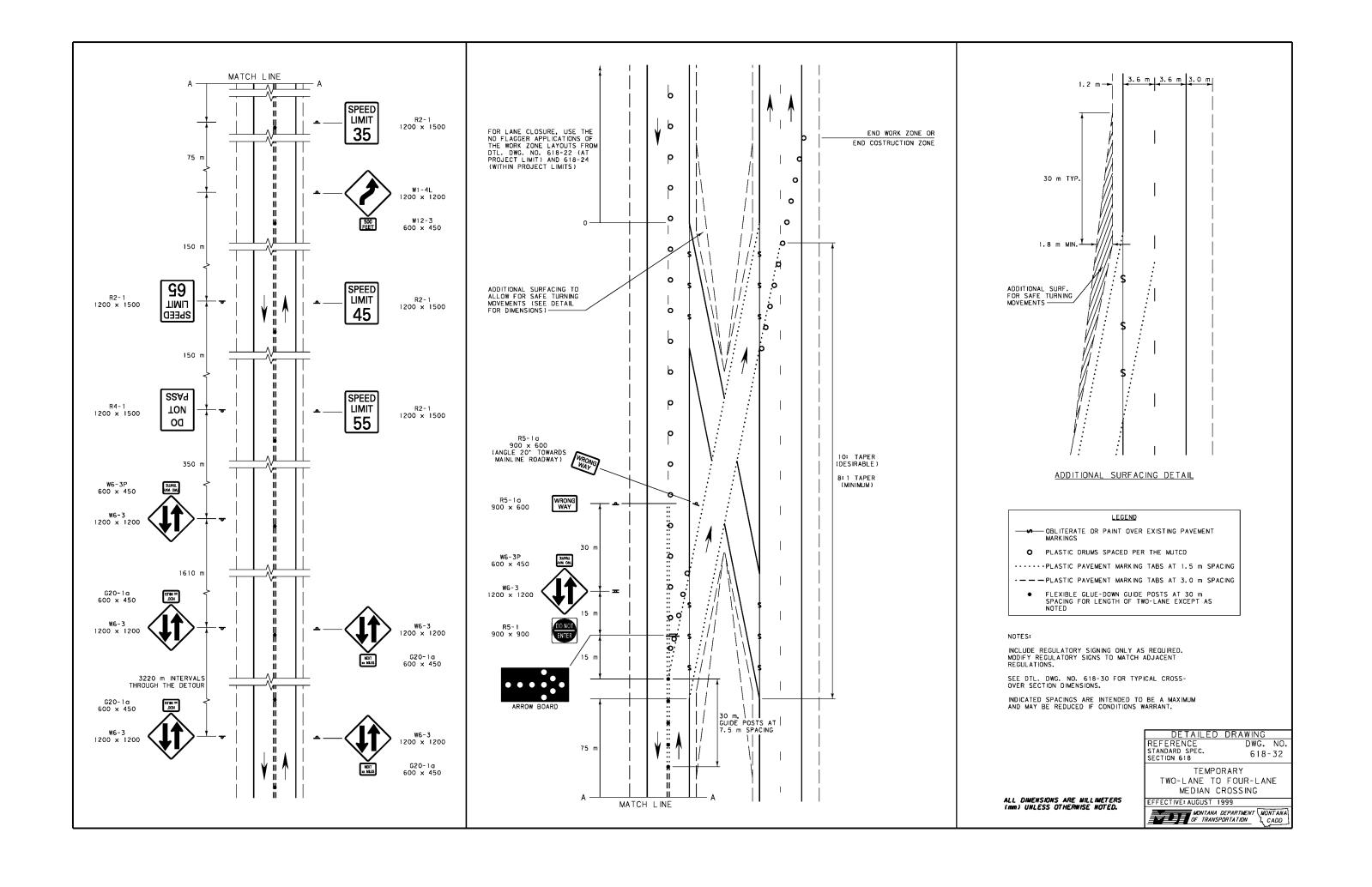


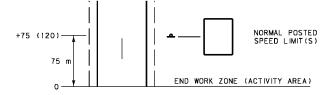


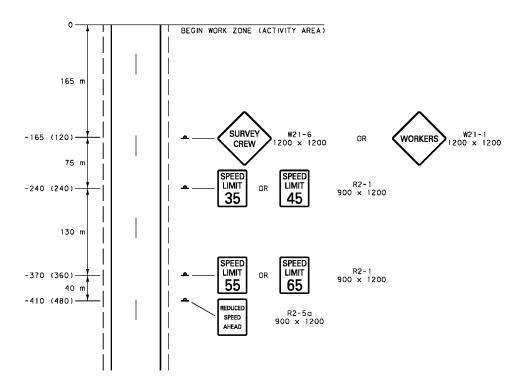












SHORT DURATION ACTIVITIES ARE DEFINED AS THOSE LASTING UP

USE THIS SIGN LAYOUT WHEN WORK IS TO TAKE PLACE ON THE TRAVELED WAY. SIGNING FOR WORK ON OR NEAR THE SHOULDER MAY BE LIMITED TO THE USE OF TWO 1200 mm WARNING SIGNS AND WORK OUTSIDE THE SHOULDER TO THE USE OF ONE 1200 mm

SIGN BOTH TRAVEL DIRECTIONS ON TWO-LANE, TWO-WAY ROADWAYS OR BOTH SHOULDERS ON TWO-LANE, ONE-WAY ROADWAYS.

DISTANCES SHOWN IN PARENTHESES ARE FOR DELINEATOR MOUNTED

SEE DTL. DWG. NO. 618-36 "SHORT-TERM STATIONARY CREW SIGNING" IF THE DOUBLE PENALTY REGULATION IS TO BE UTILIZED.

# DURATION - MUTCD: 6G-2

Short duration: up to 1 hr.
Traffic affected as controlincreases.
Simplified controls may be warranted.
Short-term stationary: 1 to 12 hr.
Most maintenance, survey work.
Reflective devices should be used.

### 61-8-314. MCA:

Construction Zone may include a Work Zone.
Separate speed limits can be set for each.
Post signs identifying the boundaries of each.
Double pendity applies only to Work Zone.
Double pendity must be posted at Construction Zone boundary.
Work Zone cannot exceed actual activity area more than 500 ft.

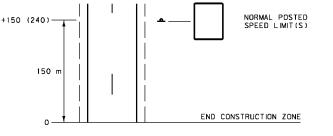
DETAILED DRAWING REFERENCE DWG. NO. STANDARD SPEC. 618-34 SECTION 618

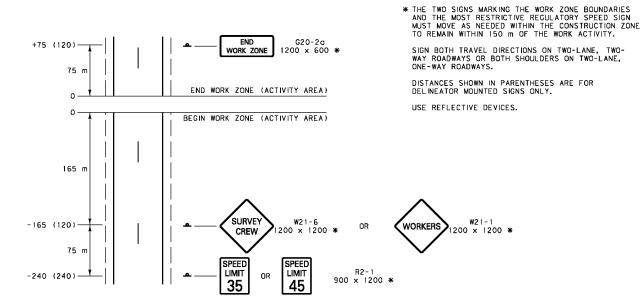
> SHORT DURATION CREW SIGNING

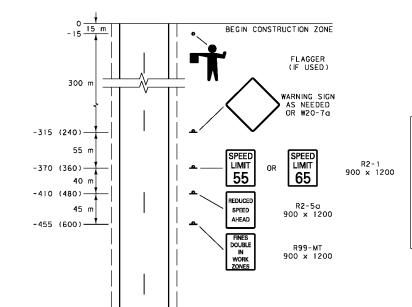
EFFECTIVE: AUGUST 1999

ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.









# DURATION - MUTCO: 6G-2

Short duration: up to 1 hr.
Traffic affected as controlincreases
Simulified controls may be warranted.
Short-term stationary: 1 to 12 hr.
Most molintenance, survey work.
Reflective devices should be used.

### 61-8-314. MCA:

Occupancy
Construction Zone may include a Work Zone.
Separate speed limits can be set for each.
Post signs identifying the boundaries of each.
Double penalty applies only to Work Zone.
Double penalty must be pasted at Construction Zone boundary.
Work Zone cannot exceed actualactivity area more than 500 ft.

SHORT-TERM STATIONARY ACTIVITIES ARE DEFINED AS THOSE LASTING GREATER THAN ONE HOUR, UP TO A

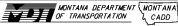
USE THIS SIGN LAYOUT WHEN WORK IS TO TAKE PLACE ON THE TRAVELED WAY. SIGNING FOR WORK ON OR NEAR THE SHOULDER MAY BE LIMITED TO THE USE OF TWO 1200 mm WARNING SIGNS AND WORK OUTSIDE THE SHOULDER TO THE USE OF ONE 1200 mm WARNING SIGN.

THE CONSTRUCTION ZONE REFERS TO THE GENERAL AREA THAT REQUIRES TEMPORARY WORK ZONE TRAFFIC CONTROL. IT SHOULD NOT EXCEED 4.8 KILOMETERS

DETAILED DRAWING REFERENCE DWG. NO. STANDARD SPEC. 618-36

> SHORT-TERM STATIONARY

EFFECTIVE: AUGUST 1999



ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

SECTION 618

CREW SIGNING